

**In the Claims:**

Please amend Claims 22-24, all as shown below. Applicant respectfully reserves the right to prosecute any originally presented or canceled claims in a continuing or future application. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Original) A system for software application development in a portal environment, comprising:

a design-time environment that allows the design of a portal application, said design-time environment including

a Java Server Page design editor component, and,

a webflow design editor component;

a run-time environment that runs said portal application, said run-time environment including

a control container and lifecycle driver component,

a control factory component, and,

an application flow and state management component; and,

wherein the system can be switched from the design-time environment to the run-time environment, to automatically effectuate changes from one environment to the other.

2. (Original) The system of claim 1 wherein the design-time environment and the run-time environment are provided as part of an integrated development environment, that allows an application developer to use both the design-time environment and the run-time environment, and to switch from one environment to another to create, edit, update, or run the portal application.

3. (Original) The system of claim 1 wherein the Java Server Page design editor component is used to edit and create Java Server Page (JSP) pages for use by the portal application.

4. (Original) The system of claim 1 wherein the webflow design editor component is used to edit the webflow that determines the logical flow of the portal application.

5. (Original) The system of claim 1 wherein the control container and lifecycle driver component is used to determine the look-and-feel of the portal application interface.

6. (Original) The system of claim 1 wherein the control factory component uses a factory for control creation, and subsequently drives control lifecycles during portal application request handling.

7. (Original) The system of claim 1 wherein the application flow and state management component is guided by a webflow file format which exploits annotations that declare possible destinations of a flow transition, according to flow processing and dictates what state is shared between which pages, and between which page groups.

8. (Original) A method for software application development in a portal environment, comprising the steps of:

providing a design-time environment that allows the design of a portal application, said design-time environment including

a Java Server Page design editor component, and,  
a webflow design editor component;

providing a run-time environment that runs said portal application, said run-time environment including

a control container and lifecycle driver component,  
a control factory component, and,  
an application flow and state management component; and,

allowing the system to be switched from the design-time environment to the run-time environment to automatically effectuate changes from one environment to the other.

9. (Original) The method of claim 8 wherein the design-time environment and the run-time environment are provided as part of an integrated development environment, that allows an application developer to use both the design-time environment and the run-time environment, and to switch from one environment to another to create, edit, update, or run the portal application.

10. (Original) The method of claim 8 wherein the Java Server Page design editor component is used to edit and create Java Server Page (JSP) pages for use by the portal application.

11. (Original) The method of claim 8 wherein the webflow design editor component is used to edit the webflow that determines the logical flow of the portal application.

12. (Original) The method of claim 8 wherein the control container and lifecycle driver component is used to determine the look-and-feel of the portal application interface.

13. (Original) The method of claim 8 wherein the control factory component uses a factory for control creation, and subsequently drives control lifecycles during portal application request handling.

14. (Original) The method of claim 8 wherein the application flow and state management component is guided by a webflow file format which exploits annotations that declare possible destinations of a flow transition, according to flow processing and dictates what state is shared between which pages, and between which page groups.

15. (Original) A computer readable medium, including instructions stored thereon which when executed cause the computer to perform the method for software application development in a portal environment, comprising the steps of:

providing a design-time environment that allows the design of a portal application, said design-time environment including

a Java Server Page design editor component, and,

a webflow design editor component;

providing a run-time environment that runs said portal application, said run-time environment including

a control container and lifecycle driver component,

a control factory component, and,

an application flow and state management component; and,

allowing the system to be switched from the design-time environment to the run-time environment to automatically effectuate changes from one environment to the other.

16. (Original) The computer readable medium of claim 15 wherein the design-time environment and the run-time environment are provided as part of an integrated development environment, that allows an application developer to use both the design-time environment and the run-time environment, and to switch from one environment to another to create, edit, update, or run the portal application.

17. (Original) The computer readable medium of claim 15 wherein the Java Server Page design editor component is used to edit and create Java Server Page (JSP) pages for use by the portal application.

18. (Original) The computer readable medium of claim 15 wherein the webflow design editor component is used to edit the webflow that determines the logical flow of the portal application.

19. (Original) The computer readable medium of claim 15 wherein the control container and lifecycle driver component is used to determine the look-and-feel of the portal application interface.

20. (Original) The computer readable medium of claim 15 wherein the control factory component uses a factory for control creation, and subsequently drives control lifecycles during portal application request handling.

21. (Original) The computer readable medium of claim 15 wherein the application flow and state management component is guided by a webflow file format which exploits annotations that

declare possible destinations of a flow transition, according to flow processing and dictates what state is shared between which pages, and between which page groups.

22. (Currently Amended) A method for developing a software application in a portal environment, comprising the steps of:

- using a Java Server Page design editor to create or update a Java Server Page (JSP) page for the application interface, together with embedded controls;
- using a webflow design editor to create a webflow for the application logical flow, and to store the webflow as a webflow file;
- optionally performing a visual test or debug of the application;
- deploying the application to a portal server;
- populating a control container at the portal server with ~~any-needed~~ business controls and presentation controls from a control factory;
- displaying or otherwise executing the application, together with ~~any-applicable~~ the business controls and presentation controls; and,
- periodically determining the current state of the application on the portal server, and parsing the webflow to update the application display to the user.

23. (Currently Amended) A system for developing a software application in a portal environment, comprising:

- computer-readable instructions which when executed by the computer cause the computer to perform the steps of:
  - providing a Java Server Page design editor to allow the creation or update of a Java Server Page (JSP) page for the application interface, together with embedded controls;
  - providing a webflow design editor to allow a developer create a webflow for the application logical flow, and to store the webflow as a webflow file;
  - providing an interface to allow a developer to optionally perform a visual test or debug of the application;
  - allowing a developer to deploy the application to a portal server;
  - populating a control container at the portal server with ~~any-needed~~ business controls and presentation controls from a control factory;

displaying or otherwise executing the application, together with ~~any applicable~~  
the business controls and presentation controls; and,

periodically determining the current state of the application on the portal server,  
and parsing the webflow to update the application display to the user.

24. (Currently Amended) A computer readable medium, including instructions stored  
thereon which when executed cause the computer to perform the:

providing a Java Server Page design editor to allow the creation or update of a Java  
Server Page (JSP) page for the application interface, together with embedded controls;

providing a webflow design editor to allow a developer create a webflow for the  
application logical flow, and to store the webflow as a webflow file;

providing an interface to allow a developer to optionally perform a visual test or debug of  
the application;

allowing a developer to deploy the application to a portal server;

populating a control container at the portal server with ~~any-needed~~ business controls and  
presentation controls from a control factory;

displaying or otherwise executing the application, together with ~~any applicable~~ the  
business controls and presentation controls; and,

periodically determining the current state of the application on the portal server, and  
parsing the webflow to update the application display to the user.